

CHAPTER 10

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10.00 General

The Maintenance Management System is composed of a group of interrelated management tools designed that provide a basis for planning, scheduling, operating and controlling the State's highway maintenance effort with economy and effectiveness. The use of this system places continuing emphasis on the economic utilization of personnel, equipment and materials, within the resources available to each Maintenance Manager, Area Superintendent and Supervisor.

10.01 Management System Components

The system has four basic components, each of which is essential to the functioning of the whole.

- (A) Inventory is the definition and accounting for all of the physical highway features in use that the Department of Transportation is charged to maintain.
- (B) Levels of Service provide a definite criteria for maintenance work inasmuch as they define the way a highway should look or function as a result of the maintenance effort and specify frequency or response appropriate for the various levels.
- (C) Maintenance Activities, which must be performed to maintain the inventory, have been identified and defined, and are grouped into 15 Families. Fourteen of these families are used to track expenditures against the Maintenance allocation and one family (Family Y) is used for those charges when Maintenance forces are doing work for others.
- (D) The Information Subsystem gathers, translates and compiles raw data from the field regarding levels, inventory, activities, labor, equipment, materials and expenditures; it then transmits this information to proper levels of management.

As Plate 10-1 illustrates, these components must work together as a system in order for the Maintenance Management System to achieve its objective.

The techniques and formalized management processes of the Maintenance Management System are outlined in detail in the Maintenance Manual Volume 2.

10.02 Maintenance Defined

The legal definitions of maintenance as shown in Section 27 of the Streets and Highways Code includes the following:

- (A) “The preservation and keeping of rights-of-way, and each type of roadway, structure, safety convenience or device, planting, illumination equipment and other facility, in the safe and usable condition to which it has been improved or constructed, but does not include reconstruction or other improvements.”
- (B) “Operation of special safety conveniences and devices, and illuminating equipment.”
- (C) “The special or emergency maintenance or repair necessitated by accidents or by storms or other weather conditions, slides, settlements or other unusual or unexpected damage to a roadway, structure or facility.”

“The degree and type of maintenance for each highway, or portion thereof, shall be determined at the discretion of the authorities charged with the maintenance thereof, taking into consideration traffic requirements and moneys available.”

10.03 Maintenance Direction

The maintenance level is affected by many variables such as climatic conditions, traffic density, terrain, pavement types, geographical location and the age of the facility. In addition, the maintenance level is also influenced by the type or class of road; freeway, expressway or conventional; it's surrounding environment, characteristics and density of traffic.

It is recognized that any defined level or quality of maintenance must be tempered by the judgment and experience of those responsible for maintaining the State highway system. It is imperative that these factors are considered, commensurate with the function of the facility maintained.

These levels are not designed to, nor do they establish a legal standard of care. They are published solely for the information and guidance of the employees of the Department of Transportation. They are subject to modification as conditions warrant.

It is the intention that all Maintenance personnel be constantly alert in their travels to detect deficiencies or needs of the highway system.

State highway facilities maintained in total or part by forces of other agencies should be maintained in conformance with State maintenance levels. Facilities of other agencies maintained by State forces should be maintained to the same level as State highway facilities unless otherwise directed by the agency responsible.

In order to insure the required overall level of maintenance, frequent inspection trips by key personnel are necessary.

The supervisor or a specifically designated member of the crew should travel over all highways in the section, including ramps and collector systems, at least once a week to observe overall conditions and detect deficiencies. Known or potential problem areas may require more frequent inspections.

The weekly inspections will be an integral part of the supervisor's work planning and scheduling activities.

The Area Superintendent should observe overall conditions within his or her area of responsibility to assure conformance with the established maintenance levels. Facilities maintained by other agencies should be reviewed by designated maintenance personnel for conformance with maintenance levels at least once a month.

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SCHEMATIC DIAGRAM OF MAINTENANCE MANAGEMENT SYSTEM

PLATE 10-1

